

# **A Stance Guide and Method of Use**

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## **BACKGROUND OF THE INVENTION**

### **Field of the Invention**

(0001) The present invention relates generally to the field of exercise apparatus. More particularly, the present invention is directed to stance guides for helping the user achieve and hold stances for corresponding health benefits.

### **Description of the Related Art**

(0002) Numerous exercise equipments are available in the market today for a variety of human exercises. Typically a person, as for example in the case of a weight-lifting machine, performs a pre-determined sequence of movements while interacting with and moving certain parts of the exercise equipment to achieve corresponding health benefits. On the other hand, numerous other pseudo-static or even static forms of exercises either exist or are being discovered that also provides the person with health benefits. For example Tai-Ji Chuan from China, also known as shadow boxing, is a pseudo-static exercise known to benefit a person's body flexibility and general health. For another example, Yoga can be classified as a static exercise known to benefit a person's body flexibility and mental clarity. While it is not absolutely required to have an equipment accompanying the pseudo-static or static stances of these exercises, in many cases it is nevertheless helpful or even highly desirable to provide an accompanying equipment to guide and assist the user so as to increase the easiness and efficiency for achieving these stances. This becomes particularly important where achieving and holding certain specific stances are physically strenuous.

## **SUMMARY OF THE INVENTION**

(0003) A stance guide and method of use are proposed to help the user achieve and hold one or more stances  $S_j$ , where  $j = (1, 2, \dots, N)$  and  $N \geq 1$ , so that the

achievement and holding of each  $S_j$  provides a corresponding health benefit to the user.

(0004) The stance guide includes a foot engaging device for guiding and engaging at least one foot of the user, a body engaging device for guiding and engaging at least one part of the user body and a framing structure connected to the foot engaging device and the body engaging device.

(0005) Various structural dimensions of the foot engaging device, the body engaging device and the framing structure relevant to guiding and engaging the user's feet and body are made adjustable to accommodate a range of body and feet variation of the user population.

(0006) The foot engaging device or the body engaging device of the stance guide can further include a corresponding engagement sensing and signaling device for sensing and signaling the correctness of engagement.

(0007) The above engagement sensing and signaling devices can further include a timing device for timing the duration of correct engagement.

(0008) The stance guide can further include an attached optional display device for selectably displaying one or more of the stances  $S_j$  as a visual aid to achieving and holding the stances  $S_j$ .

(0009) Where some of the stances  $S_j$  require a specific position and orientation of the user's hands, a hand engaging device, as part of the body engaging device, can be added for guiding and engaging the user's hands.

(00010) If desirable, the body engaging device or the framing structure can further include a safe guard device for reducing the risk of an accidental fall of the user while trying to achieve and hold the stances  $S_j$ .

(00011) For the health benefit to be significant, the method of using the stance guide further includes, for each stance  $S_j$ , a recommended range of holding period per practice and practicing frequency.

(00012) A first set of specific stances  $S_1$ ,  $S_2$ ,  $S_3$  and  $S_4$ , together with an associated specific stance guide, are proposed to more easily and efficiently provide the health benefits of direct development of stronger body muscles and better body flexibility and indirect strengthening of the bladder muscles and nerves causing a reduction of frequent and excess habitual urination.

(00013) A second set of specific stances  $S_5$ ,  $S_6$ ,  $S_7$  and  $S_8$ , together with an associated specific stance guide, are proposed to more easily and efficiently provide the health benefits of direct development of stronger body muscles and better body flexibility and indirect enhancement of sleep quality and reduction of body weight.

(00014) To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that changes may be made in the specific construction illustrated.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

(00015) Various other objects, features and attendant advantages of the present invention will become fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawing, in which like reference characters designate the same or similar parts throughout the several views, and wherein:

**Fig. 1A, Fig. 1B, Fig. 1C and Fig. 1D** illustrate a first stance, labeled stance  $S_4$ , for the user of the present invention to achieve and hold to realize a corresponding health benefit;

**Fig. 2A, Fig. 2B, Fig. 2C and Fig. 2D** illustrate an intermediary stance of  $S_4$ , labeled  $S_2$ , and the stance  $S_4$ , together with a corresponding stance guide of the present invention, for the user to use thus achieving and holding  $S_2$  and  $S_4$  to realize corresponding health benefits;

**Fig. 3** illustrates a second stance, labeled  $S_3$ , for the user of the present invention to achieve and hold to realize a corresponding health benefit;

**Fig. 4** illustrates another stance, labeled  $S_8$ , for the user of the present invention to achieve and hold to realize a corresponding health benefit;

**Fig. 5A and Fig. 5B** illustrate an intermediary stance of  $S_8$ , labeled  $S_6$ , together with a corresponding stance guide of the present invention, for the user to use thus achieving and holding  $S_6$  and  $S_8$  to realize corresponding health benefits; and

**Fig. 6** illustrates only the stance guide of the present invention for the user to use thus progressively achieving and holding a number of stances  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$ ,  $S_5$ ,  $S_6$ ,  $S_7$  and  $S_8$  to realize a number of corresponding health benefits.

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

(00016) In the following detailed description of the present invention, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will become obvious to those skilled in the art that the present invention may be practiced without these specific details. In other instances, well-known methods, procedures, materials, components and circuitry have not been described in detail to avoid unnecessary obscuring aspects of the present invention. The detailed description is presented largely in terms of simplified perspective views. These descriptions and representations are the means used by those experienced or skilled in the art to concisely and most effectively convey the substance of their work to others skilled in the art.

(00017) Reference herein to “one embodiment” or an “embodiment” means that a particular feature, structure, or characteristics described in connection with the embodiment can be included in at least one embodiment of the invention. The appearances of the phrase “in one embodiment” in various places in the specification are not necessarily all referring to the same embodiment, nor are separate or alternative embodiments mutually exclusive of other embodiments. Further, the order of process flow representing one or more embodiments of the invention do not inherently indicate any particular order nor imply any limitations of the invention.

(00018) **Fig. 1A, Fig. 1B, Fig. 1C and Fig. 1D** illustrate a first stance, labeled stance **S<sub>4</sub> 4**, for the user of the present invention to achieve and hold to realize a corresponding health benefit, to be presently described. **Fig. 1A** is a side view, **Fig. 1B** is a front view, **Fig. 1C** is a top view of the stance **S<sub>4</sub> 4** whereas **Fig. 1D** illustrates the details of the user's hands. To help the illustration, an x-y-z Cartesian coordinate is introduced wherein the x-direction is where the user's body faces, the y-direction runs from the user's right shoulder toward his left shoulder and the z-direction runs vertically upwards. As illustrated, both feet **12** and **14** need to be flat with heels **16** against the ground and centered in a sagittal plane of the body. Right foot **14** is positioned in front of and spaced as far ahead of left foot **12** as possible. Right knee **20** bent at about 110 degrees with left knee **18** stretched as straight as possible while keeping the body weight on the right foot **14**. The overall back **22** should form a straight line with the left leg **24**. The upper back **28** should be arched and the shoulders **30** curved forward. The upper right arm **34** should be positioned ahead (+x direction) of the upper left arm **32** with the right elbow **46** slightly ahead of (+x direction) the right wrist **50**. The right hand **42** should form an open-palm, Christian style praying orientation except having a bent right thumb **54**, pointing in the x-direction, and having a right index finger **58** separated from the rest of right fingers **62**, the right thumb **54** positioned at the same height as but about five (5) inches ahead of (+x direction) the heart **64**. The lower left arm **36** should be pointing approximately in the negative y-direction with the left elbow **44** slightly ahead of (+x direction) the left wrist **48**, the left hand **40** made into a fist with palm side up and positioned about three (3) inches below the user's belly button **66** while continuously

keeping the body weight on the right foot 14. Fig. 3 illustrates a second stance  $S_3$  3, that is very similar to and is essentially a mirror image of stance  $S_4$  4 regarding the positions of left/right foot and left/right arm. For example, in stance  $S_3$  3 the left foot 12 is positioned in front of and spaced as far ahead of the right foot 14 as possible, etc.

(00019) Through practice, it has been found that the achievement and holding of stances  $S_3$  and  $S_4$  on a regular basis provides the following health benefits to many people:

- (1) Direct development of stronger body muscles and better body flexibility.
- (2) Indirect strengthening of the bladder muscles and nerves causing a reduction of frequent and excess habitual urination for those having these problems.

More elaboration on these health benefits will be presently described.

(00020) Notwithstanding the above health benefits of the stances  $S_3$  and  $S_4$ , the regular achievement and holding of these stances, given their peculiar nature, can be quite strenuous and challenging to a beginning practitioner. For example, a practitioner can feel tension, sore and slight pain on his calf and back of knees. For another example, a practitioner, due to the in-line positioning of his feet 12 and 14 for stances  $S_3$  and  $S_4$ , can even fall from a tendency of body instability in the y-z plane thus giving up on the practice all together. Therefore, the present invention proposes a stance guide together with a method of use to help the user achieve and hold one or more stances  $S_j$ , where  $j = (1, 2, \dots, N)$  and  $N \geq 1$ , so that the achievement and holding of each  $S_j$  provides a corresponding health benefit to the user. Furthermore, as some or all of the stances  $S_j$  can appear to be quite complex thus intimidating to a beginning practitioner, each stance  $S_j$  can optionally be broken down into a sequence of one or more progressively simplified, intermediary stances each utilizing a corresponding portion of the stance guide together with a corresponding method of use to increase the easiness and efficiency for bridging, for example, an intermediary stance of  $S_3$  to the ultimate stance  $S_3$ .

(00021) **Fig. 2A, Fig. 2B, Fig. 2C and Fig. 2D** illustrate an intermediary stance of stance **S<sub>4</sub> 4**, labeled stance **S<sub>2</sub> 2**, and the stance **S<sub>4</sub> 4**, together with a corresponding stance guide of the present invention, for the user to use thus achieving and holding stances **S<sub>2</sub> 2** and **S<sub>4</sub> 4** to realize corresponding health benefits, to be presently described. **Fig. 2A** illustrates the intermediary stance **S<sub>2</sub> 2** together with a corresponding stance guide of the present invention, for the user to use thus achieving and holding stance **S<sub>2</sub> 2**. Comparing **Fig. 2A** with **Fig. 1A, Fig. 1B, Fig. 1C and Fig. 1D** reveals that stance **S<sub>2</sub> 2** is a simplified intermediary stance of stance **S<sub>4</sub> 4** in that, except for a simplified positioning and orientation of the user's arms and hands of stance **S<sub>2</sub> 2**, stance **S<sub>2</sub> 2** is the same as stance **S<sub>4</sub> 4**. Specifically in stance **S<sub>2</sub> 2**, both upper arms **32** and **34** are naturally down with lower arms **36** and **38** pointing approximately in the x-direction. Both hands **40** and **42** are made into a fist with palm side up. As a side remark but still not illustrated here for simplicity, a fourth stance **S<sub>1</sub> 1**, very similar to stance **S<sub>2</sub> 2**, is essentially a mirror image of stance **S<sub>2</sub> 2** regarding the positions of left/right foot and left/right arm.

(00022) Corresponding to the stance **S<sub>2</sub> 2**, the stance guide includes a front foot panel **100a** and a rear foot panel **100c**, connected to each other by a backbone beam **100d**. Both foot panels **100a** and **100c** are oriented and located substantially along the x-axis and spaced apart from each other by an adjustable x-spacing for guiding and correctly positioning the user's feet **12** and **14**. It is important to provide an adjustable x-spacing as individual members of a targeted user population are expected to exhibit somewhat different, albeit within a pre-determined range, of body sizes and spans between their feet. For the same reason, it is also important to provide adjustable x- and y-dimensions for the foot panels **100a** and **100c**. To further stabilize the stance guide, while not specifically shown here, the backbone beam **100d** can have a stabilizing bar attached to its rear end and extending substantially in the y-direction. Notice that an extra center foot panel **100b** is also included for additional flexibility of the stance guide. As illustrated in **Fig. 2D** for stance **S<sub>4</sub> 4**, the user can alternatively engage his feet **12** and **14** upon the center foot panel **100b** and the rear foot panel **100c**. This can be especially useful for a user with a short span between his feet. Additionally, the center foot panel **100b** can be used for a different stance altogether



and this will be presently illustrated. Thus, the foot panels 100a, 100b and 100c together with the backbone beam 100d provide the function of foot engagement and guidance for the stances  $S_2$  2 and  $S_4$  4.

(00023) Refer to Fig. 2B, Fig. 2C and Fig. 2D, to engage and guide the user's body under stance  $S_4$  4, an adjustable left elbow-engaging member 120a, an adjustable right elbow-engaging member 120b and an adjustable safety hand-engaging guard 120c are provided. The bottom inset of Fig. 2C illustrates the details of adjustment of the adjustable right elbow-engaging member 120b. The adjustable right elbow-engaging member 120b is a truss having a base bushing 130 affixed to the balancing bar 140a. A sliding rod 132 is slidably inserted and supported by the base bushing 130 with a rod lock 131 to fix the position of the sliding rod 132 after a sliding adjustment. At the top end of the sliding rod 132 is disposed an end mounting member 133 with a number of adjustable antennae 134 rotatably attached thereon forming a truss-like structure. Thus, after numerous degrees of mechanical adjustment of these adjustable antennae 134 according to a particular user's body size and arm length, etc., the position and orientation of the right elbow 46, upon its contact with the adjustable antennae 134, can be assured to conform to the stance  $S_4$  4 within a pre-determined range of user body and feet variation. By now it should also become clear that, if desired, an up to 6-axis adjustability (translation along the x-, y- and z-axis, rotation around the x-, y- and z-axis) of these adjustable antennae 134 can be implemented with more mechanical embodiments. Similarly, the position and orientation of the left elbow 44, upon its contact with the adjustable antennae of the adjustable left elbow-engaging member 120a, can also be assured to conform to the stance  $S_4$  4 within a pre-determined range of user body and feet variation. Likewise, by requiring that the user's right index finger 58 and rest of right fingers 62 insert through a finger loop of the adjustable safety hand-engaging guard 120c as illustrated, the user's right hand 42 can also be assured to conform to the stance  $S_4$  4 within a pre-determined range of user body and hand variation. In essence, the elbow-engaging members 120a and 120b and the safety hand-engaging guard 120c are adjustably attached to a balancing bar 140a. The balancing bar 140a can include a left

end grip 140b and a right end grip 140c for helping the user to mount and dismount the stance guide.

(00024) As remarked before, due to the in-line positioning of his feet 12 and 14 for stance S<sub>4</sub> 4, a practitioner can fall from a tendency of body instability in the y-z plane. Therefore, with the substantial leveraging distance between the adjustable safety hand-engaging guard 120c and the foot panels 100a and 100c as provided, the adjustable safety hand-engaging guard 120c also helps to reduce the risk of an accidental fall of the practitioner while trying to achieve and hold the stance S<sub>4</sub> 4. Just like the case of foot panels 100a and 100c, the structural dimensions of the elbow-engaging members 120a and 120b and the safety hand-engaging guard 120c relevant to engaging and guiding the user's elbows and hands are made adjustable to accommodate a pre-determined population range of user body and hand variation. For example, the y-distance between the elbow-engaging members 120a and 120b can be accordingly made adjustable to accommodate a range of shoulder widths. For another example, the z-height of the adjustable safety hand-engaging guard 120c is accordingly made adjustable to accommodate a range of user heights, etc. To engage and guide the user's body under stance S<sub>2</sub> 2, the balancing bar 140a acts to engage and guide the formation and positioning of the user's hands 40 and 42, both made into a gripping fist with palm side up as illustrated in Fig. 2A. Hence, the elbow-engaging members 120a and 120b, the safety hand-engaging guard 120c together with the balancing bar 140a provide the function of body engagement and guidance for the stances S<sub>2</sub> 2 and S<sub>4</sub> 4. It is remarked that, in addition to the adjustable safety hand-engaging guard 120c, numerous other embodiments can be provided to help reducing the risk of an accidental fall of the practitioner while trying to achieve and hold the stance S<sub>4</sub> 4. For example, while not shown, the two end grips 140b and 140c can be properly extended toward the hips of the user to serve a similar function by preventing excessive movement of the user's hips. For another example, the two elbow-engaging members 120a and 120b can both be made of strong and highly rigid material to also serve a similar function by preventing excessive movement of the user's elbows 44 and 46.

(00025) To complete the stance guide, the balancing bar 140a is connected to the backbone beam 100d through a framing structure that in turn includes a connected set of left supporting truss 140d, a right supporting truss 140e and a bottom supporting truss 140f. Again, the structural dimensions of the framing structure relevant to engaging and guiding the user's elbows and hands can be made adjustable to accommodate a pre-determined population range of user body and hand variation. For example, the height of both supporting trusses 140d and 140e can be made adjustable to accommodate a range of user heights so that, when the user exerts an effort of lifting up his fists under stance S<sub>2</sub> 2, a corresponding downward pressure will be induced on the muscles of both of his legs 24 and 26 further enhancing the intensity of practice. It is remarked that, in addition to the adjustable safety hand-engaging guard 120c, numerous other embodiments can be provided to help reducing the risk of an accidental fall of the practitioner while trying to achieve and hold the stance S<sub>4</sub> 4. For example, while not shown, two hip safe guard members can be added on the supporting trusses 140d and 140e and properly extended toward the hips of the user to serve a similar function by preventing excessive movement of the user's hips.

(00026) By now it should become clear that using the stance guide as illustrated should help the user achieve and hold stances S<sub>2</sub> 2 and S<sub>4</sub> 4. Additionally, with the numerous mechanical adjustments available to the various dimensions of the stance guide, it should also be clear that the stance guide should help the user achieve and hold stances S<sub>1</sub> 1 and S<sub>3</sub> 3 as well, being respectively a mirror image of stance S<sub>2</sub> 2 and stance S<sub>4</sub> 4.

(00027) The regular achievement and holding of stance S<sub>1</sub> 1 and stance S<sub>2</sub> 2, respectively being an intermediary of stance S<sub>3</sub> 3 and stance S<sub>4</sub> 4, is known to provide the following health benefits:

- (1) Direct development of stronger body muscles and better body flexibility.
- (2) Increasing the easiness and efficiency for bridging stance S<sub>1</sub> 1 to stance S<sub>3</sub> 3 and for bridging stance S<sub>2</sub> 2 to stance S<sub>4</sub> 4.

Thus, the stance guide allows its user to effectively and gradually develop stronger muscles and flexibility in order to perform the next, more advanced stances S<sub>3</sub> 3 and S<sub>4</sub> 4. During the bridging period, the user should practice stances S<sub>1</sub> 1 and S<sub>2</sub> 2 about three times a day at about five minutes duration each time then move on to stances S<sub>3</sub> 3 and S<sub>4</sub> 4 when he/she feels comfortable. While regularly achieving and holding stance S<sub>3</sub> 3 and stance S<sub>4</sub> 4, the practitioner will feel tensed, sore and slightly painful on his/her calf and back of knees. As a result, it has been known to cause a reduction of frequent and excess habitual urination for many of those practitioners having these problems. It was also known to cause a reduction of the amount of discharge per urination. One theory behind these observed results is that these feelings indicate that the related body muscles and nerves are stretched and stimulated, hence sending a corresponding signal to the practitioner's brain. Consequently, the muscles and nerves of the practitioner's bladder will also be strengthened hence the observed results. Additional related health benefits include: preservation of minerals and electrolytes in the body, indirect reduction of incidents of stroke and heart attack from the reduction of urination frequency of the elders (abrupt temperature change from a warm bedroom to a cold bathroom), indirect avoidance of falling and tripping (walking in darkness in the middle of bed time) and the enhancement of the quality of sleep. In essence, the regular achievement and holding of stance S<sub>3</sub> 3 and stance S<sub>4</sub> 4 is known to provide the following health benefits:

- (1) Direct development of stronger body muscles and better body flexibility.
- (2) Indirect strengthening of the bladder muscles and nerves causing a reduction of frequent and excess habitual urination for those having these problems.

For the above health benefits to be significant, the holding period for the stance S<sub>3</sub> 3 and the stance S<sub>4</sub> 4 are further recommended to be progressed from about one (1) minute to about ten (10) minutes each time with a range of practicing frequency to be progressed from about two (2) times to about ten (10) times a day. Nominally, a user of the stance guide should practice three times a day at five minutes each time. In this way, in about two weeks, the above health benefits should materialize.

(00028) By now it should become clear to those skilled in the art that the various

exemplary embodiments of the stance guide can be easily adapted and modified to suit additional applications without departing from the spirit and scope of this invention. For example, the function of foot engagement and guidance for the stances  $S_2$  2 and  $S_4$  4 does not have to be only provided by the foot panels 100a, 100b and 100c together with the backbone beam 100d. Instead, foot engagement and guidance can alternatively be provided by a rectangular-shaped base platform, in the x-y plane, with three locationally adjustable foot depressions thereon. For another example, one or more of the foot panels 100a, 100b and 100c can instead be replaced by a slipper-like structure. The function of body engagement and guidance, if desirable, can include an angle bracket erected from the base platform for engaging and guiding the user's front knee. A straight bracket can also be erected from the base platform for engaging and guiding the user's rear knee. Two locationally adjustable beams, along the y-direction, can be added on top of the balancing bar 140a and extending toward the user's shoulders 30 for engaging and guiding the user's shoulders. The adjustable antennae 134 of the elbow-engaging members 120a and 120b can instead be replaced by a spherical element for engaging and guiding the user's elbow albeit with less accuracy. An interior divider bar can be added to the finger loop of the adjustable safety hand-engaging guard 120c to further insure the separation of the user's right index finger 58 from the rest of right fingers 62. For increased structural rigidity, an angle brace can be added between each of the supporting trusses 140d, 140e and the bottom supporting truss 140f. If desired, the bottom supporting truss 140f and the supporting trusses 140d, 140e can even be combined into a single wall structure.

(00029) Regarding material for construction, the key structural members of backbone beam 100d, bottom supporting truss 140f, supporting trusses 140d, 140e, balancing bar 140a and end grips 140b, 140c are preferably made of knock down steel frame although some or all of them can alternatively be made of other materials such as metal, plastic, wood, glass or ceramic as long as sufficient structural rigidity of the stance guide is preserved. The material selection for the remaining members of the stance guide can come from an even wider range.

(00030) Another embodiment of the present invention, as illustrated in Fig. 2A and Fig. 2C, is a rear heel sensing device that includes a mechanical switch 102, an

adjustable timer and display device 120d for sensing, timing and displaying the duration of correctness of engagement of the user's feet. The mechanical switch 102 further includes a stationary contact 102a located beneath the rear foot panel 100c, a moving contact 102b, activated by the user's left heel 16a through a heel engaging element 102d and a transmitting spring 102c, to make or break with the fixed contact 102a. Two signal wires 102e electrically connect the mechanical switch 102 to the adjustable timer and display device 120d. The adjustable timer and display device 120d has a time display 126 and associated control knobs and switches 124 for its operation. The adjustable timer and display device 120d also has an optional image display 122 for selectably displaying one or more of the stances  $S_1$  1,  $S_2$  2,  $S_3$  3 and  $S_4$  4 as a visual aid to achieving and holding these stances. Like before, the x- and y-location of the mechanical switch 102 can be made adjustable to suit a pre-determined range of user foot spans. Thus, should the user's left heel 16a firmly touch the ground the mechanical switch 102 will be closed signifying a correct heel placement and the duration of correct heel placement can be timed with a timing device and displayed on the time display 126. On the other hand, if the user's left heel 16a does not firmly touch the ground the mechanical switch 102 will stay open signifying an incorrect heel placement. While not shown here for simplicity, the adjustable timer and display device 120d can include a signaling device such as an indicator light, an audible device or even a mechanical vibrator touching thus stimulating the user's body to alert the user of the incorrect heel placement. Alternatively, the rear heel sensing device can be implemented with a linear position sensor, an optical interrupter, an acoustic interrupter, a capacitive proximity sensor, a piezoelectric force sensor, etc. Likewise, the timing device can be implemented with an electronic timer, a mechanical timer, etc. The time display 126 and the image display 122 can be implemented with an LED display, an incandescent display, a plasma display, an LCD display, a CRT display, etc.

(00031) By now it should become clear to those skilled in the art that, to help insuring correctness of the user's stance, additional embodiment of the present invention can include the sensing of positioning or orientation of other parts of the body that is relevant to the stance under consideration. For example, a front knee

angle sensing and signaling device can be added to insure the correct angle of the front knee. For another example, a rear knee sensing and signaling device can be added to insure the straightness of the rear knee. For a third example, an additional front heel sensing and signaling device can be added and having whose output signal compared with that of the rear heel sensing device to insure that the body weight is kept on the front foot. For a fourth example, elbow sensing and signaling devices can be added to insure the correctness of the positioning of the elbows.

(00032) Yet another embodiment of the present invention is that an optional pre-recorded video medium can be included with the stance guide to demonstrate to the user, upon playing back, the actual achieving and holding of each of the desired stances as a training tool. As examples, the video medium can be a VHS cassette, a DVD disk or a VCD disk.

(00033) Fig. 4 illustrates another stance, labeled stance  $S_8$  8, for the user of the present invention to achieve and hold to realize a corresponding health benefit. To help the illustration, an x-y-z Cartesian coordinate is introduced wherein the x-direction is where the user's body faces, the y-direction runs from the user's right shoulder toward his left shoulder and the z-direction runs vertically upwards. As illustrated, the left heel 16a needs to be against the ground. Right foot 14 is positioned in front of left foot 12 with right knee 20 bent thus right foot 14 held as high in the air as possible. Left knee 18 should also be bent as much as possible. The overall back 22 should lean slightly forward with upper back 28 arched and shoulders 30 curved forward. The upper right arm 34 should be positioned ahead of (+x direction) the upper left arm 32. Right elbow 46 should be positioned slightly ahead of (+x direction) right wrist 50. The right hand 42 should form an open-palm, Christian style praying orientation except having a bent right thumb 54, pointing in the x-direction, and having a right index finger 58 separated from the rest of right fingers 62, the right thumb 54 positioned at the same height as but about five (5) inches ahead of (+x direction) the heart 64. The lower left arm 36 should be pointing approximately in the negative y-direction with the left elbow 44 slightly ahead of (+x direction) the left wrist 48, the left hand 40 made into a fist with palm side up and positioned about three (3) inches below the user's belly button 66. While not

illustrated here for simplicity, yet another stance  $S_7$ , very similar to stance  $S_8$  8, is essentially a mirror image of stance  $S_8$  8 regarding the positions of left/right foot and left/right arm. For example, in stance  $S_7$  the left foot 12 would be positioned in front of the right foot 14 with left knee 18 bent thus the left foot 12 held as high in the air as possible, etc.

(00034) **Fig. 5A and Fig. 5B** illustrate an intermediary stance of stance  $S_8$  8, labeled stance  $S_6$  6, together with a corresponding stance guide of the present invention, for the user to use thus achieving and holding  $S_6$  and  $S_8$  to realize corresponding health benefits. Notice the difference between stance  $S_6$  6 and stance  $S_8$  8 is that, in stance  $S_6$  6 of **Fig. 5A**, the upper back 28 and shoulders 30 are relaxed, both upper arms 32 and 34 are tilted in the y-z plane so as to slightly open up the user's arm pits with both lower arms 36 and 38 pointing generally in the x-direction and both hands 40 and 42 forming a gripping position as if pushing a wheel barrel. While also not illustrated here for simplicity, yet another stance  $S_5$  5, very similar to stance  $S_6$  6, is essentially a mirror image of stance  $S_6$  6 regarding the positions of left/right foot and left/right arm. In **Fig. 5A**, the center foot panel 100b serves to properly position the user's left foot 12 while the left end grip 140b and the right end grip 140c respectively serves to position the user's left hand 40 and right hand 42 under stance  $S_6$  6. Thus, the front foot panel 100a and the rear foot panel 100c together with its mechanical switch 102 are left unused here. In **Fig. 5B** the adjustable left elbow-engaging member 120a, the adjustable right elbow-engaging member 120b and the adjustable safety hand-engaging guard 120c function under stance  $S_8$  8 the same way as they did under stance  $S_4$  4.

(00035) By now it should become clear that using the stance guide as illustrated should help the user achieve and hold stances  $S_6$  6 and  $S_8$  8. Additionally, with the numerous mechanical adjustments available to the various dimensions of the stance guide, it should also be clear that the stance guide should help the user achieve and hold stances stance  $S_5$  5 and stance  $S_7$  7 as well, being respectively a mirror image of stance  $S_6$  6 and stance  $S_8$  8.



(00036) The regular achievement and holding of stance S<sub>5</sub> 5 and stance S<sub>6</sub> 6, respectively being an intermediary of stance S<sub>7</sub> 7 and stance S<sub>8</sub> 8, is known to provide the following health benefits:

- (1) Direct development of stronger body muscles and better body flexibility.
- (2) Increasing the easiness and efficiency for bridging stance S<sub>5</sub> 5 to stance S<sub>7</sub> 7 and for bridging stance S<sub>6</sub> 6 to stance S<sub>8</sub> 8.

Thus, the stance guide allows its user to effectively and gradually develop stronger muscles and flexibility in order to perform the next, more advanced stances S<sub>7</sub> 7 and S<sub>8</sub> 8. During the bridging period, the user should practice stances S<sub>5</sub> 5 and S<sub>6</sub> 6 about three times a day at about five minutes duration each time then move on to stances S<sub>7</sub> 7 and S<sub>8</sub> 8 when he/she feels comfortable. With the practitioner regularly achieving and holding stance S<sub>7</sub> 7 and S<sub>8</sub> 8, it has been known to help enhancing the quality of sleep, strengthen leg muscles, reduce weight and prevent falling and stripping due to stronger legs. In essence, the regular achievement and holding of stance S<sub>7</sub> 7 and stance S<sub>8</sub> 8 is known to provide the following health benefits:

- (1) Direct development of stronger body muscles and better body flexibility.
- (2) Indirect enhancement of sleep quality and reduction of body weight for those having these problems.

For the above health benefits to be significant, the holding period for the stance S<sub>7</sub> 7 and the stance S<sub>8</sub> 8 are further recommended to be progressed from about one (1) minute to about ten (10) minutes each time with a range of practicing frequency to be progressed from about two (2) times to about ten (10) times a day. Nominally, a user of the stance guide should practice three times a day at five minutes each time. In this way, in about two weeks, the above health benefits should materialize.

(00037) To summarize with clarity, Fig. 6 illustrates only the stance guide of the present invention for the user to use thus progressively achieving and holding a

number of stances  $S_1$ ,  $S_2$ ,  $S_3$ ,  $S_4$ ,  $S_5$ ,  $S_6$ ,  $S_7$  and  $S_8$  to realize a number of corresponding health benefits.

(00038) As described with numerous exemplary embodiments, a stance guide and method of use are proposed to help the user achieve and hold a number of stances  $S_j$ , where  $j = (1, 2, \dots, N)$  and  $N \geq 1$ , so that the achievement and holding of each  $S_j$  provides a corresponding health benefit to the user. However, for those skilled in this field, these exemplary embodiments can be easily adapted and modified to suit additional applications without departing from the spirit and scope of this invention. Thus, it is to be understood that the scope of the invention is not limited to the disclosed embodiments. On the contrary, it is intended to cover various modifications and similar arrangements based upon the same operating principle. The scope of the claims, therefore, should be accorded the broadest interpretations so as to encompass all such modifications and similar arrangements.